

Ship Shoal: Whiskey Pass Closure (TE 14-1a)

Coast 2050 Strategy – Strategy 14. Restore and maintain the Isles Dernieres island chain.

Project Location - Region 3, Terrebonne Basin, Terrebonne Parish, south of Pelto Marshes. Whiskey Pass is the cut in the chain that separates Whiskey Island from Trinity Island.

Problem – The Isles Dernieres chain, one of the most rapidly deteriorating shorelines in the U.S., is losing its structural framework functions for the coastal/estuarine ecosystem including storm buffering capacity and protection for inland bays, estuary and wetlands, human populations and infrastructure. Chain breakup has resulted from both major storm actions and from loss of nourishing sediment from the natural system due to human alterations. The Pass functions as a sink draining sediment from the lateral transport system.

Goals – 1) Restore integrity of Whiskey Pass and retain structural function of coastal/estuary ecosystem. 2) Add new offshore prime quality sediment to Whiskey Pass to close an existing sediment sink. 3) Develop a 16-mile continuous island made up of East Island, New Cut closure, Trinity Island, Whiskey Pass closure, and Whiskey Island to provide a protective barrier for back bays and inland marshes to reduce wave and tidal energies and reduce mainland marsh shoreline loss. 4) Create 366 acres of barrier island habitat in the existing Pass.

Proposed Solution – Mine and place Ship Shoal sand by cutterhead or hopper dredge to close Whiskey Pass to subaerial elevations. Closure of the Pass over a length of 14,784 ft includes construction of 52 acres dunes 7 ft high and 150 ft wide, 102 acres supratidal habitat at a 4-ft elevation, 187 acres intertidal habitat at 1 ft elevation, and 25 acres subtidal habitat at 0 to -1.5 ft elevation. All areas would be planted and sand fencing placed to trap wind-blown sediment. Minerals Management Service has designated Block 88 of Ship Shoal for this project, to be transported approximately 10 miles to Whiskey Pass.

Project Benefits – Prevention of sediment loss from the system into deeper Gulf or bay waters. Wave heights in back bays would be reduced, resulting in a slight reduction of inland marsh and shoreline loss. Project would benefit a total of 1,228 acres of island and shallow water. After 20 years, there would be a net of 344 acres of island over the without project condition. Another benefit is the addition of offshore sediment into the sediment transport system of coastal Louisiana.

Project Costs - Fully funded first cost is \$171,253,300; total fully funded cost is \$171,569,000.

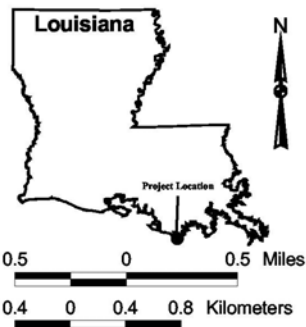
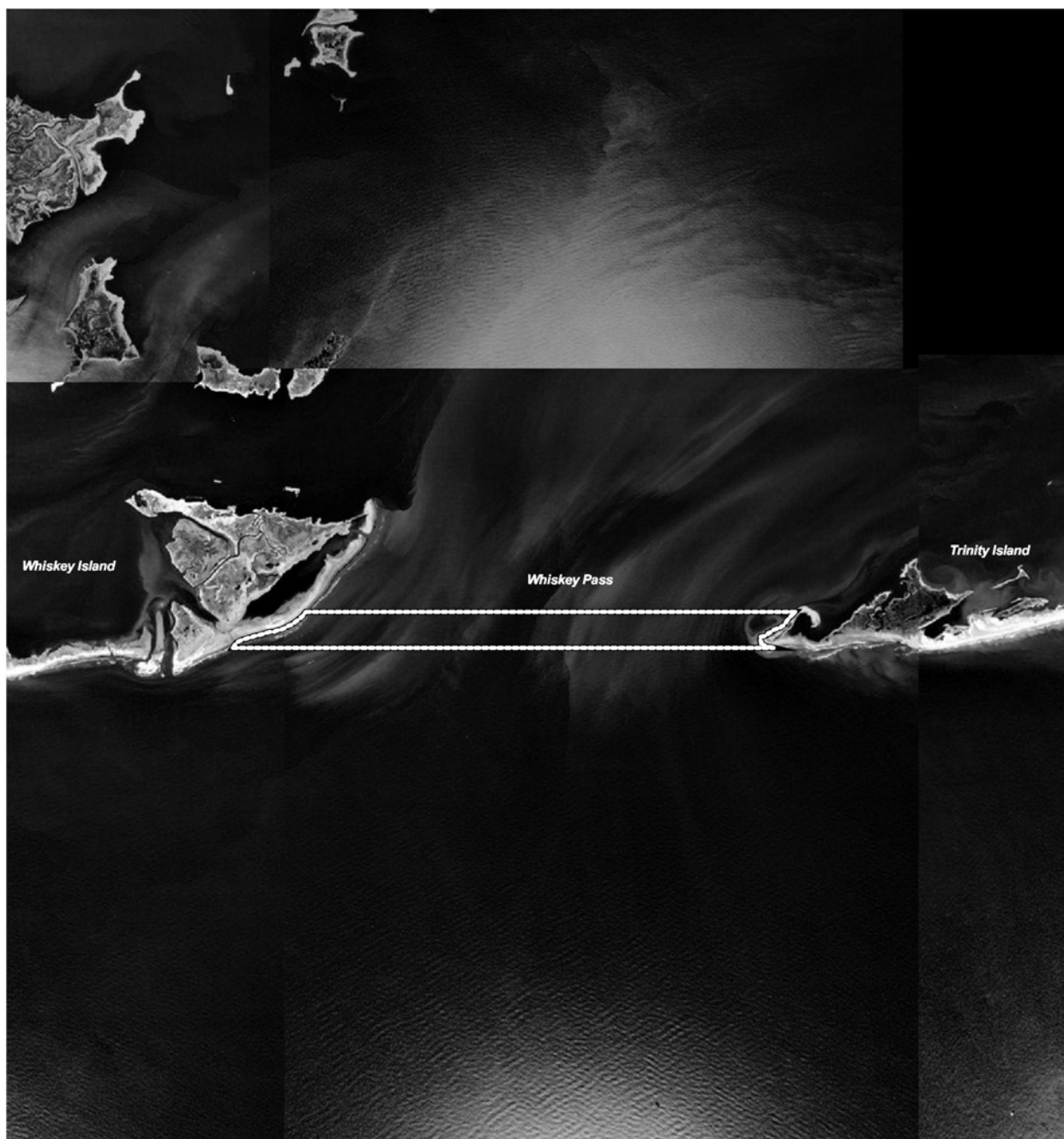
Risk/Uncertainty and Longevity/Sustainability - A high degree of risk is associated with this project due to greater storm effects in this area of the coast and engineering and construction difficulties. Benefits should continue for more than 20 years due to the high quality and compatibility of Ship Shoal sand.

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Project area

Data Source:
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Region 3

Whiskey Island Closure
(TE-14-1a)